IN THE CLAIMS:

1. **(Currently Amended)** A method for driving a solid-state image pickup device which stores, in a plurality of photo-electric conversion units, signal charges corresponding to an incident light during a prescribed time period, each of said photo-electric conversion units being provided with an overflow drain (OFD) structure, excludes surplus charges from said photo-electric conversion units by an electric potential barrier, said electric potential barrier being maintained between said OFD structure and each of said photo-electric conversion units, reads out, after cutting off said incident light by a cut-off means such as a mechanical shutter, said signal charges by grouping said photo-electric conversion units into a prescribed number of regions, and outputs image signal from all of the photo-electric conversion units by repeating the read-out procedures, which comprises the steps of:

cutting off said incident light;

raising up said electric potential barrier; and

starting reading out said signal charges.

2. **(Previously Presented)** The method for driving a solid-state image pickup device according to Claim 1, wherein said electric potential barrier during the read-out step is raised up by a voltage greater than 0.4.V.

3.-4. **(Canceled).**

5. **(Currently Amended)** The method for driving a solid-state image pickup device according to Claim 1, wherein said OFD structure is a vertical OFD structure which excludes the surplus charges from said photo-electric conversion units by said electric potential barrier by a voltage applied to a substrate of said vertical OFD structure, which comprises the steps of:

cutting off said incident light;

raising up said electric potential barrier; and

starting reading out said signal charges.

6. **(Previously Presented)** The method for driving a solid-state image pickup device according to Claim 5, wherein said electric potential barrier during the read-out step is raised up by a voltage greater than 0.4V.

7.-8. **(Canceled).**

9. **(Currently Amended)** The method for driving a solid-state image pickup device according to Claim 1, wherein said OFD structure is a horizontal OFD structure which excludes the surplus charges from said photo-electric conversion units by said electric potential barrier by a voltage applied to a gate of said horizontal OFD structure, which comprises the steps of:

cutting off said incident light;

raising up said electric potential barrier; and

starting reading out said signal charges.

10. **(Previously Presented)** The method for driving a solid-state image pickup device according to Claim 9, wherein said electric potential barrier during the read-out step is raised up by a voltage greater than 0.4V.

11.-12. **(Canceled).**

13. **(New)** The method for driving a solid-state image pickup device according to Claim 1, wherein said signal charges are read out from said photo-electric conversion units through signal read-out portions and the electric potential of said electric potential barrier during the read-out step is deeper than an electric potential which is applied in signal read-out portion during the times except said read-out step.

14. **(New)** The method for driving a solid-state image pickup device according to Claim 13, wherein the potential different between said electric potential of said electric potential barrier during the read-out step and said electric potential which is applied in said signal read-out portion is greater than 0.4V.

15. **(New)** The method for driving a solid-state image pickup device according to Claim 5, wherein said signal charges are read out from said photo-electric conversion units through signal read-out portions and the electric potential of said electric potential barrier during the read-out step is deeper than an electric potential which is applied in signal read-out portion during the times except said read-out step.

16. **(New)** The method for driving a solid-state image pickup device according to Claim 15, wherein the potential difference between said electric potential of said electric potential barrier during the read-out step and said electric potential which is applied in said signal read-out portion is greater than 0.4V.

17. **(New)** The method for driving a solid-state image pickup device according to Claim 9, wherein said signal charges are read out from said photo-electric conversion units through signal read-out portions and the electric potential of said electric potential barrier during the read-out step is deeper than an electric potential which is applied in signal read-out portion during the times except said read-out step.

18. **(New)** The method for driving a solid-state image pickup device according to Claim 17, wherein the potential difference between said electric potential of said electric potential barrier during the read-out step and said electric potential which is applied in said signal read-out portion is greater than 0.4V.